CLAIMS

1. A rubber extruding method extruding a rubber extruded intermediate by discharging rubber from a discharge port of a die plate mounted to an outlet of an extruder, wherein

said die plate has an inflow port through which rubber flows in from the extruder side,

said discharge port, and

a rubber flow path connecting said inflow port and said discharge port therebetween,

said discharge port is of a flat shape with a lower section having a smaller height and a higher section having a larger height and with a height varying along a width direction to thereby extrude said rubber extruded intermediate with a thickness varying along a width direction, and

in addition each extruding speed of said rubber extruded intermediate is made uniform at positions along a width direction thereof.

2. The rubber extruding method according to claim 1, wherein said die plate satisfies the following relation:

$$(Ssi / Sso) > (Shi / Sho),$$

wherein

Sso is an area per unit width in said lower section,

Ssi is an area at said inflow port through which rubber

flowing through said area Sso per unit width in said lower section passes,

Sho is an area per unit width in said higher section and

Shi is an area at said inflow port through which rubber flowing through said area Sho per unit width in said higher section passes.

3. The rubber extruding method according to claim 1 or 2, wherein said lower section comprises an end lower section at least at one end in a width direction, in a triangular shape formed by gradually decreasing its height toward said one end and

said inflow port has at least one protruding section protruding outwardly in the width direction from the one end of said discharge port.

4. The rubber extruding method according to claim 3, wherein said rubber flow path has at least one scooped part scooped out a surface thereof lower than a bottom edge of said discharging port, said scooped part has a depth decreasing toward said discharging port side from inflow port side.

5. The rubber extruding method according to any of claims 1 to 4, wherein a preformer is disposed adjacent to said die plate on the upstream side thereof,

said preformer has a receiving port receiving rubber from

said extruder,

a sending port feeding the rubber into said inflow port of said die plate and

an intermediate flow path connecting said receiving port and said sending port therebetween, and

a shape of said receiving port is close to a shape of said discharge port of said die plate.

6. The rubber extruding method according to any of claims 1 to 5, wherein said rubber extruded intermediate is a tread rubber for a tire.

7. A rubber extruding apparatus extruding a rubber extruded intermediate by discharging rubber from a discharge port of a die plate mounted to an outlet of an extruder, wherein

said die plate has an inflow port through which rubber flows in from the extruder side,

said discharge port, and

a rubber flow path connecting said inflow port and said discharge port therebetween,

said discharge port is of a flat shape with a lower section having a smaller height and a higher section having a larger height and with a height varying along a width direction to thereby extrude said rubber extruded intermediate with a thickness varying along a width direction, and

said die plate satisfies the following relation:

(Ssi / Sso) > (Shi / Sho),

wherein Sso is an area per unit width in said lower section , Ssi is an area at said inflow port through which rubber flowing through said area Sso per unit width in said lower section passes, Sho is an area per unit width in said higher section and Shi is an area at said inflow port through which rubber flowing through said area Sho per unit width in said higher section passes.

8. The rubber extruding apparatus according to claims 7, wherein each extruding speed of said rubber extruded intermediate is made uniform at positions along a width direction thereof.

9. The rubber extruding apparatus according to claim 8, wherein said rubber flow path has at least one scooped part scooped out a surface thereof lower than a bottom edge of said discharging port, said scooped part has a depth decreasing toward said discharging port side from inflow port side.

10. The rubber extruding method according to claim 9, wherein said rubber flow path has at least one scooped part scooped out a surface thereof lower than a bottom edge of said discharging port, said scooped part has a depth decreasing toward said discharging port side from inflow port side.

11. The rubber extruding apparatus according to any of claims 7 to 10, wherein a preformer is disposed adjacent to said die plate on the upstream side thereof,

said preformer has a receiving port receiving rubber from said extruder,

a sending port feeding the rubber into said inflow port of said die plate and

an intermediate flow path connecting said receiving port and said sending port therebetween, and

a shape of said receiving port is close to a shape of said discharge port of said die plate.

12. The rubber extruding method according to any of claims 7 to 11, wherein said rubber extruded intermediate is a tread rubber for a tire.

13. The rubber extruding apparatus according to any of claims 7 to 12, comprising a feed means feeding said rubber extruded intermediate to a drum for making a raw tire.